IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
VOELKEL et al.) Applications
)
)
Serial No. Not Assigned)
)
Filed:)
)
For: CRYSTALLINE CHOLINE ASCORBATE

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Prior to examination, kindly amend the above-identified application as follows.

IN THE CLAIMS

Please amend the claims as shown in the attached sheets.

REMARKS

The claims have been amended to eliminate multiple dependency. No new matter has been added. A clean copy of the claims is attached.

Entry of the above amendment is respectfully solicited.

Respectfully submitted,

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CLEAN VERSION OF AMENDED CLAIMS - 52203

3. A crystalline choline ascorbate as claimed in claim 1, wherein the diffraction lines at d = 3.80 Å and 4.55 Å are most intense in the range between 3.40 and 4.70 Å in the 2 Θ X-ray powder diffractogram

9. A choline ascorbate obtainable by a process defined according to claim 6.

10. The use of choline ascorbate defined according to claim 1 for producing drugs.

11. The use of choline ascorbate defined according to claim 1 as additive in foods, animal feeds, or as a component in food supplements.

MARKED VERSION OF AMENDED CLAIMS - 52203

3. A crystalline choline ascorbate as claimed in claim 1 [either of claims 1 or 2], wherein the diffraction lines at d = 3.80 Å and 4.55 Å are most intense in the range between 3.40 and 4.70 Å in the 2 Θ X-ray powder diffractogram

9. A choline ascorbate obtainable by a process defined according to claim 6 [one of claims 6 to 8].

10. The use of choline ascorbate defined according to claim 1 [one of claims 1 or 9] for producing drugs.

11. The use of choline ascorbate defined according to claim 1 [one of claims 1 or 9] as additive in foods, animal feeds, or as a component in food supplements.

CLAIMS AS FILED - 52203

1. A crystalline choline ascorbate

2. A crystalline choline ascorbate as claimed in claim 1 in the form of crystals free from water of crystallization.

3. A crystalline choline ascorbate as claimed in claim 1, wherein the diffraction lines at d = 3.80 Å and 4.55 Å are most intense in the range between 3.40 and 4.70 Å in the 2 Θ X-ray powder diffractogram

4. A crystalline choline ascorbate as claimed in claim 3, wherein the intensity ratio of the diffraction lines at d = 3.80 Å and d = 4.55 Å is at least 0.5.

5. A crystalline choline ascorbate as claimed in claim 3, wherein the intensity ratio of the diffraction lines at d = 3.80 Å and d = 4.67 Å is at least 0.4.

6. A process for preparing crystalline choline ascorbate by reacting ascorbic acid with trimethylamine and ethylene oxide, which comprises carrying out the reaction in the temperature range from -105C to 405C.

7. A process as claimed in claim 6, wherein the reaction is carried out in a water-miscible organic solvent.

8. A process as claimed in claim 7, wherein choline ascorbate is crystallized in the solvent used for the reaction.

9. A choline ascorbate obtainable by a process defined according to claim 6.

10. The use of choline ascorbate defined according to claim 1 for producing drugs.

11. The use of choline ascorbate defined according to claim 1 as additive in foods, animal feeds, or as a component in food supplements.